

RECEIVED
CENTRAL FAX CENTER

IN THE SPECIFICATION:

OCT 10 2006

Please amend the paragraph spanning lines 13-33 on page 4, as follows:

The incredibly demanding data storage industry requires ~~every~~ ever increasing data densities and data rates from storage products such as disk drives. One way to increase the amount of data that can be stored on a disk is to increase the number of tracks per inch, or track density. This of course requires that magnetic sensors used to read those tracks must have ever decreasing track widths. However, the small tracks widths demanded in current products lead to free layer stability challenges. Although the magnetization of a free layer is free to rotate in the presence of a magnetic field, it must be biased in a desired direction, parallel with the ABS. This magnetic biasing is generally provided by a hard bias layer constructed of a high coercivity (high Hc) material, which may be formed either at each lateral side of the sensor or in stack (ie. below or above the free layer).

Please amend the paragraph spanning lines 11-17 on page 12, as follows:

The coercivity of the pinning layer 336 (and ~~therefore~~ therefore its ability to prevent free layer flipping) is ~~proportional~~ proportional to the volume of its magnetic layers 340, 338. However, the thickness of these layers is constrained by the gap budget (ie. the distance between the shields 302, 304. According to the present invention, increased bias pinning coercivity is provided by extending the ~~pinning~~ pinning layer 336 substantially beyond the track width TW of the sensor. In fact, by extending the pinned

HIT1P080/HSJ9-2004-0033US1

2

layer 336 beyond the track width of the sensor, the magnetic layers 338, 340 can be made as thin as 20 to 40 angstroms each.

HIT1P080/HSJ9-2004-0033US1

3